Dividend change and Future profitability

ABSTRACT
This study firstly, examines the relation between dividend changes and future profitability, calculated in terms of either upcoming income or abnormal income. Secondly, the information content of dividends hypothesis is considered in which dividend changes deliver information about the level of profitability in succeeding years, incremental to market and accounting data. The study shows that dividend changes are positively associated to earnings variations in later two years after the dividend change.

Signaling hypothesis of the dividend change explains that change in payout policy is linked with future profitability of the company. A positive change shows positive future change in earnings and negative change provide negative future in earnings and thus profits may reduce the payouts announced by management. Through this study, 60 dividend changes from banking sector of Pakistan for the period of January 2011 to December 2015 are analyzed using multiple regression tests.

The study capitalizes on 13 sampled banks that are the part of KSE – 100 Index. Using annual reports of these banks several variables are extracted. Theoretical model assumes the dependent variables to be ‘dividend change’ and the independent variables to be ‘ROA’, ‘ROE’ and ‘EPS’. The model also assumes firm size, leverage, tangibility, company risk and market risk as control variables.
## Contents

CERTIFICATE OF APPROVAL ........................................................................ Errors! Bookmark not defined.  
ACKNOWLEDGEMENT ........................................................................ Errors! Bookmark not defined.  
DEDICATION ........................................................................................................... Errors! Bookmark not defined.  
ABSTRACT .................................................................................................................. 234  
Chapter # 1 .................................................................................................................. 238  
INTRODUCTION ...........................................................................................................  
  1.1: Introduction ........................................................................................................... 238  
  1.3: Aim of the study: ................................................................................................. 240  
  1.4: Scope of research: ............................................................................................... 240  
  1.5: Objective of the research: ................................................................................... 240  
Chapter # 2 .................................................................................................................. 241  
LITERATURE REVIEW .................................................................................................  
  2.1: Literature Review: ............................................................................................... 241  
  2.2 Dividend change: ................................................................................................... 241  
  2.3 Future profitability: ............................................................................................... 243  
  2.4: Hypotheses: ......................................................................................................... 246  
Chapter # 3 .................................................................................................................. 247  
RESEARCH METHODOLGY .........................................................................................  
  3.1: Data collection: .................................................................................................... 247  
  3.2: Study population: ............................................................................................... 247  
  3.3: Study sampling: .................................................................................................. 247  
  3.4: Theoretical framework of my study: ................................................................... 247  
  3.5: Control variables: ............................................................................................... 248  
  3.6: Return on Assets: ............................................................................................... 248  
    3.6.1: Firm size: ..................................................................................................... 248  
    3.6.2: Growth of the firm: ..................................................................................... 249  
    3.6.3: Financial leverages: .................................................................................... 249  
  3.7: Return on Equity (ROE): .................................................................................. 249
3.7.1: Sales turnover: ................................................................. 250
3.7.2: Beta (market risk): ............................................................. 250
3.7.3: Idiosyncratic risk i.e. standard error: .................................. 250
3.8: Earnings per share (EPS): ...................................................... 250
  3.8.1: Firms performance: ........................................................ 251
  3.8.2: Tangibility: ..................................................................... 251
3.9: Dividend change: ................................................................. 251
3.10: Statistical Tests: ................................................................. 252
  3.11 Regression model: ............................................................... 252
Chapter # 4 ............................................................................ 253
DATA ANALYSIS ..................................................................... 253
  4.1: Data Analysis and Description: ........................................... 253
  4.2: Descriptive Statistics: ......................................................... 253
  4.3: Model Summary: ............................................................... 254
  4.4: ANOVA: .......................................................................... 254
  4.5: Coefficients: ................................................................... 255
  4.6: Correlations: .................................................................... 256
Chapter # 5 ............................................................................ 258
CONCLUSION ......................................................................... 258
  5.1: Conclusion: ...................................................................... 258
  5.2: Limitation: ....................................................................... 259
References ............................................................................. 260
List of tables

Table 1 ................................................................. 16
Table 2 ................................................................. 17
Table 3 ................................................................. 17
Table 4 ................................................................. 18
Table 5 ................................................................. 19
Chapter # 1
INTRODUCTION

1.1: Introduction:

Through this study we find the relationship among dividend change and future profitability. Much organization now days gave a large amount of money to its shareholders as a dividend. Even it is not compulsory for the firms and companies to give dividend. A lot of studies and articles explain many motives and suggestions of distribution of dividends to shareholders. But here it’s all about the mind set and the investors think that increase or decrease in dividend provides the good or bad future in earnings of the firm. This makes the company future dark or lightens for future sustainability.

Dividends are very important factor in corporate finance. Corporate finance deals in financing, investments and dividends. In dividends, there generate a lot of issues in its distribution. An organization gives dividend to its shareholders annually. So the investors did not attract to that company because they think that specific company has no more projects for gaining profit and for reinvestment of the money. An organization did not give dividends to its shareholders and retained it with them for further investments so more investors attract toward it because of chances of profit and earnings.

Here in Pakistan many ambiguities are in dividend change and unrelated hypothesis about dividend change. According to the study, we found that if increase occurs in the dividend change so it will increase the share price of the firm. This shows the direct inters of the investor for gaining much profit. Furthermore the management of the firms cannot increase any change in their dividends till if they see a proper increase in their earnings. When this increase in measured they feel comport and fell relax in their future. We study some more work of different authors, which suggest that due to Signaling hypothesis there is a specific change can feel in share price. The dividend changes, announcements signals for the coming future prospects of that company. This explains that “the present day share price explain about the future cash flow of the firm and
also about new share price for the coming year”. Other writers, stressed more about it and explain one clear meaning of an increase in share price is due to that investor has revised. That is the signals, which received by investor and attract toward the firms for investments. Miller and Modigliani in early seventies more explain that signaling hypothesis and argued that management has more information than shareholders and if they want to attract the investor so they can. That’s the reason management did not increase the dividend. Because if in future, the investor understands the process and also the cash flow did not increase in future so it will be it will be the case of fraud and will move toward bankruptcy. Now for control the situation managers use their optimist nature and keep calm and work hard for it. Then we see an increase in returns after change announcements.

Developed economies of the world clearly explain in their studies and researches about the relation between the payout policies and future earnings. For this all the companies must show some increase in their cash flow and increase in the dividend which mean an increase in earnings. If decrease found it mean those companies’ earnings are decrease from the last year.

In many studies, the researchers originate very less confirmation about the fact decrease or increase in payout is directly related to firm’s profit.

All the top ranked companies of Pakistan are listed in Karachi stock exchange one of the important and verified stock market of the Pakistan economy. The KSE-100 index is a portfolio of high capitalized companies of the Pakistan stock exchange. In KSE-100 index banking sector is selected. There are total 23 banks currently working in Pakistan and listed in the PSX. Here we collect data from banking sector available in KSE-100 index.

The above study analyzed that dividend change declared for the five years. It starts from January 2011 to December 2015 to find out the relation of future profits of companies. The regression model is used for the data analyzing.

1.2: Scheme of Study:

The above study is patronized as follows the first chapter, which consists of Introduction to the study, chapter second will review the previous study, which proceed to literature review, chapter three consist of methodology and theoretical framework of the study, chapter four will
completely analyze and discuss the whole data and chapter fifth the final chapter will be the conclusion of the study

1.3: **Aim of the study:**

The goal of my research is to enlighten the linkage among dividend change and future profits and its concrete outcomes in banking sector of Pakistan as well to create information in more detail form that how to increase earnings in future with dividend change announcements in firm.

1.4: **Scope of research:**

Scope of my study is related with banking sector of Pakistan. Findings of this study will may not be general to all banks. There are 60 observations from which we observe dividend observation and compare the relation with ROA, ROE and EPS. This data is taken from pakistan Stock Exchange for the year 2011 to 2015. Whole work is from banking sector of Pakistan. The study is based on secondary data and research is quantitative in nature.

1.5: **Objective of the research:**

Objective of this study is to find out the relation between dividend change and profitability. For finding this relation the study analyzed the data using regression methods.

1.6: **Significance of the study:**

This study has examined the relationship between dividend changes and profitability. Examine the dividend-earnings relationship using annual data. Thus finds that future earnings are improved only marginally when current dividends are included in the model. This study finds a positive relationship between unexpected dividend changes and future earnings changes and concludes that the information content of dividends can be only trivial. So the study has significant relationship between dividends and subsequent earnings of the firm.
Chapter # 2

LITERATURE REVIEW

2.1: Literature Review:

Around the globe many authors have worked to explore the relationship between changes in dividend and profitability of firms. The word dividend change is the amount of money paid respectively by its firm to its shareholders for the purpose of return of their investments. An important factor is that the increase and decrease in income and offering the dividends which are increasing and decreasing from time to time to shareholders.

Profitability is the primary objective of all the business whether directly or indirectly. Deprived of profitability for business will not continue in the long run.

2.2 Dividend payout:

In a paper by Young M. and Choia (2011) by taking data from the Korean Stock Exchange and income statements are from Korean information services. In their study, they explore that time span for knowledge content of dividends (ICD) hypothesis may be relying on the firm; attributes for example, model of company governance and expansion stage. Further Miller and Modigliani in (1961) explore that variation in stock yield contain the information which focus on the predicted profitability for the future and the movement of currency. For stockholders the stock yield in advance by financial markets is optimistic options for those businesses who will offer returns in future. Their study was specifically related to (ICD) hypothesis for Korean local based businesses, analyzing different bonds yielding changes and future profitability and which provide a high weightage comparing with United Stated based market results. Nissim and ziv (2001) and Grullon et al. (2005) they study were focus on the technique of how to value the output in comparison with US markets. In their study each and every part, the stock yield changes superiority in future taking all the changes for the succeeding by one year is not as difficult as it...
was considered the results showed. The sectional regression is the main example in the business markets of Korea which was discussed in Nissim and Ziv (2001) and in the ICD hypothesis.

In their study Shuping Chen and Terry Shevlin (2007) indicated that in the dividend change the increasing earning value is estimated information risk factor. However authors explains the information risk is a probability which is the firm specific financial statement evidence relevant to investor pricing options is of low level of accuracy, and use the factor-mimicking portfolio earnings accrual value metric to proxy for the information risk cause incomes. In their study they reveals that by expanding the three factor model which are associated with information risk cause and further discover that in the beginning the initial dividends and increase organizations shows a decline in information risk issue by loading dynamics. While dividend decreasing firms show an increase in the matching factor loadings, but that changes in the cause loadings occur months before to the dividend change announcements. This study provide an effective base for grasping the operating control and information risk factors that will further enhances the causing loading factor.

The focus of Gustavo Grullon and Roni Michaely (2005), the study was common and become a valid the line of foundation because if someone can trust for their reverse case so it will common valid foundation line, because if someone other trust one the same case like reverse intended and auto correlate so output maybe linear or nonlinear. As they explain in theirs books early of nonlinear and natural world methods so it’s not easy to support the ICD Hypothesis here on the basis of Grullon et al., 2005 study. When pull apart of the business into chaebol and non-chaebol bushiness so stock yield will provide useful information of coming future returns mostly for non-chaebol business on the basis of both linear and nonlinear mythologies. Same will be the case if we draw some part of our business for some high profit generation with less expanded business so stock yields must gave us some information for future returns. It will mostly occur in less growth and less profit business in both linear and non-linear case. But here we have to understand that if the returns like ROA will be dependent variable in our study.

Now, in much organized way they confined the values from different studies, i.e. if the validity of the ICD hypothesis can only rely on firm’s specified qualities. For example expansion or governance level of firm. They further explain that the financial data gathered with good or may be worse for small fraction shareholders will retain the yield return fast, because they are
impelled by the other shareholders. But we all know that high profit generated firms will reinvest that for more and more growth. That is the reason that ICD change its impact on expansion and firm governance. Now this all story more enlighten the fact of ICD hypothesis and gave a way to study more factors for firms’ dividend changes and announcements.

Writers Sun and Adam S. Koch (2004) gathered the data for investors to give them the information for the past year of dividends. This study basically worked on how the market read the announced change in dividend as signals and compare it with previous changes. But here is a good view of the shareholders they said that previous changes is not the final view for the future of the firm earnings it may be change in next year and earnings can increase. But they also watch the hard work of the management cash flows. They work on it empirically and find the result dividend change modifies the view of shareholders related to investment. It may affect mostly with the changes in dividend and also explain about the past changes. This is the changes which makes the shareholders to re think and re read their hopes about the firms future and invest in that specific firm.

2.3 Profitability:

In this paper Ross N. Dickens and K. Michael Casey (2002) Identifies factors that explain bank dividend policy by adapting the Barclay, M.J. and Smith (1997) model. The model was adopted investment opportunities, capital capability, size, gesturing, possession, dividend history, and risk to explain dividend payments. Empirical analysis of the study reveals an insignificant impact of dividend payments and investment opportunities, signaling, ownership, and risk and a positive relationship to size and dividend history. Their study results lead to five suggestions for making dividends pay-out decisions.

This study was conducted by Ziv and Doron Nissim (2001). Which purposes is know that does dividend announcements effect with the earnings of the company and how it is effect. Data has been taken from different sources of the in the market. Regular with the early results of different scholars. Their study revealed that there are such relationship in the earnings of the companies and their empirical study further explored that information have no such impact on the earnings. While there is a solid past and corresponding link between earnings and dividend variations, the projecting value of variations in dividends seems nominal. However their study shows that
dividends have no relations with future salaries and benefits. The reasons behind this are that an individual become have reached at some influential positions of the company so for him data shoes that it has no effect to future earnings. He further revealed it that the results are explaining the importance of dominating factor but as a whole it’s a slow and steady event in corporation. So the investigated data encourage a weak relation among dividend and salaries corrections because the results are not confirmed and reliable, and can produce error simulations of incurring procedures. They find further report that data is weak and not trustworthy. For the company dividends are considered as directly or indirectly related with the supply of variations and empirically proved results, such as bonus variations evolved to supply and cost reactions too. Dividends are actually related with supply variations and empirically, bonus variations evolved to supply to cost reactions. Dividend expansions companies’ basically have high knowledge in the present year to the former year of the bonus change. The answer of the market of bonus boosting is feeble even the boosting of bonus is a good suggestion for the worth of firm, in markets its important for the companies that the cost which they are bearing for the purpose of making good performance should achieve. If we come on the other side of by the cost is connected with changes in bonuses will effect or not effect is also important. In the second scenario it will also give base as strong and powerful as gives by change in dividends that accuracy has association with non-bonuses dynamics. From the analysis and markets survey the expectations and responses are, Earnings before to change in bonus, inflation after the bonus variations, ivy individual rate, and most probably cost per share.

This paper of Shlomo and Benartzi, January (1997) and the main purposes was taken account of the information provided related to dividend is how much affect the future earnings. They have taken the data of the past present and predicted future of businesses. They elaborate the idea that changes in dividend provide information about future earnings. For this purpose numerous dividend theories suggest that changes in dividends have evidence content about the future incomes of the firm. Companies that increase dividends in present year have practiced earnings in previous and present year, but didn’t show successive unpredicted earnings growth. Also, the extent of the dividend increase does not expected future earnings.

From the study it is revealed that those companies who reduced their dividends planning currently have impact on the current and past of the company earnings negatively but most
surprisingly they have a positive impact on the future earnings. However, steady with Linter’s model on dividend plan, businesses that increase dividends are less possible than no changing businesses to practice drop in future earnings. Therefore, their increase in simultaneous incomes can said to be rather "permanent." Instead of all these things that if we stand with the Linters model of dividends plan have same results likewise non-existence of the future growth those companies who have maximize dividends plan will have a significant impact on the future earnings including growth for the rest of expected three years and in Further earnings for the coming three years are expectant.

This study of Elfakhani and Said (1994) is about insignificance of dividends. It was generated by Miller earlier in 1962. This study directly favors dividend evidence and hypothesis model. Now what was that evidence so, it’s that private information for chances of investment associated to market valuation and cash flows of the company. This information gave the evidence that dividend change announcements attract its rate for three main reasons i.e. the change in dividend, favorableness and signaling.

According to the Carroll and Herman Manakyan (1991), the dividend information data was collected from January 1979 to December 1983 In Nebraska and Omaha. They actually write about the sudden variation in dividend announcements which is unexpected but firms need to follow it. Here are only the arguments for those sudden changes of firms because due to these sudden changes the firm will have to pay more or less dividend. This create future forecast for the investors to invest. It’s like a green signal and a hope for the coming future profits. In this situation, the signaling hypothesis acts like a bridge and connects changes in dividend and future earnings. The main goal of their study was to create relation and used structural change methodology process which really helps in adjusting heteroskedecity. After this process they find that yes their relation in changes and future earnings. This relation is noted but in very less sample of observations i.e. in 33 out of 144 firms. The most important is changing which statistically important in coefficient of variables in growing of earnings. It will added that these changes will be apparent if the information given is fake.

So, finally we can say that it’s all due to some kind of external stimuli. Which comes from the thoughts for future in changes of dividends? Will, it is also clear that there is contradiction in results of many economies. Here in Pakistan and almost if we say about Khyber pakhtoonkhwa
there is no such kind of satisfactory work can find on dividend changes. So these are efforts which i did for investigating and also tried for the best of my skills and provide data for dividend change and future profitability. This is basically the motivation which will be provided to the companies for payout polices.

2.4: Hypotheses:

H₀: There is a relationship between return on assets and changes in dividend.

H₁: There is no relationship between return on assets and changes in dividend.

H₀: There is relationship between return on equity and changes in dividend.

H₁: There is no relationship between return on equity and changes in dividend.

H₀: there is a relationship between dividend change and EPS.

H₁: there is no relationship between dividend change and EPS.

This study is basically about to find any relation among the future profits. The main purpose of the study is to analyze this relation by gathering quantitative data from home all Pakistani banks listed in PSX KSE – 100 Index of Pakistan.
Chapter # 3
RESEARCH METHODOLOGY

3.1: Data collection:

Data collected for this research study is from annual reports of the banks listed in KSE-100 index for the period of 2011 to 2015. The research is quantitative in nature and based on secondary data which is available at Karachi Stock Exchange website. Convenience sampling is used in selection of Population and sample of this study and discussed as.

3.2: Study population:

Banks listed in Pakistan stock exchange KSE-100 index is the population of my study.

3.3: Study sampling:
Banks listed in KSE-100 index at my study period is the sample of my study. During this period of time dividend change announcements are observed.

3.4: Theoretical framework of my study:

To understand the relationship between dividend changes and future profits of the companies. Defendant variable is the dividend change whereas profitability is the independent variable.

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Dependent variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>Dividend change</td>
</tr>
<tr>
<td>ROE</td>
<td></td>
</tr>
<tr>
<td>EPS</td>
<td></td>
</tr>
</tbody>
</table>
3.5: Control variables:

Many other variables other than dependent and independent variables can affect the relationship between dividend change and future profitability and referred as control variables. They are:

1. Firm size
2. Growth of the firms
3. Financial leverages
4. Sales turn over
5. Beta (market risk)
6. Idiosyncratic risk i.e. standard error
7. Tangibility
8. Firm performance

3.6: Return on Assets:

Net income divided by the total income of the company is formula of return on Assets. If the companies utilize their resources effectively and efficiently so they can produce good value of ROA.

\[ \Delta \text{ROE} = \frac{\text{ROE}_2 - \text{ROE}_0}{\text{ROE}_0} \]

\( \Delta \text{ROE} \) representing change in earnings in 2\textsuperscript{nd} year related to present year. ROE2 explains the returns in 2\textsuperscript{nd} year in relation to dividend change now ROE0 represents the return on equity in present year. Some control variables related to ROA are as:

3.6.1: Firm size:

Without explaining Firm size we cannot explain the firm’s profits and incomes. Like if say about the large firms they are expanded demographically and in creation also. This expanded form
makes them protect from bankruptcy and other risks. Few writers explain the size quality model of taking data from 5000 US firms from 1927 to 1987. This situation creates insecurity for the small firms. Through this situation, small firms produce less quantity and low quality due to less research, weak staff, low remuneration, and a lot of other issues generated. Yes, the man issue in big firms is the activity problem. Here from the studies, it is clear that big firms are not due to the efforts of management.

3.6.2: Growth of the firm:

Much of the study provides positive suggestion between growth and firm’s dividend changes and future profitability. For example, growth of sales produces very positive motivation in employees and in management and helps in promotions and retains some skill full employ in work. Growth of the firm indirectly generates opportunities for investing in new machines and can find new skills which make the firm stronger in terms of incomes and profit. In income, if growth of sales increases, it will increase economies of scale and also benefit learning curve benefit. Now if we see to the agency theory, so all the management peruse growth of sales because it helps in getting personal objectives.

3.6.3: Financial leverages:

Firm’s value does not get affected by capital building in market scenario [Modigliani and Miller (1958)]. But this is in the case when the rules of capital market are not much strong, and capital structure does not effect through it. Leverages are served as a device in explaining the uneven info and this linkage. This whole study is covered by Stiglitz and Weiss in 1998. These writers found some asymmetrical material in between the lenders and borrowers and same in shareholders and managers which directed toward a very bad selection. Lastly, according to the above words, big borrowers just use debt as a single device for presentation in market.

3.7: Return on Equity (ROE):

Earnings before interest and taxes divided by total share outstanding of the firm is the return on equity. The Value of ROE will be good if the firm provide good return of profit and vice versa.
Here the study provides some information about control variables linked with ROE and they are discussed below.

**3.7.1: Sales turnover:**

In how much efficiently and in proficient way the administration utilizes the assets of the company. This can greatly affect the company financial structure and presentation. If a firm use its resources in better and controlled way so they can perform well and can construct other firms.

**3.7.2: Beta (market risk):**

Through CAPM in 1964 and in 1965 sharp, litter and Black explained for future positive relation of stocks and its beta which is the risk factor. Beta is actually the covariance ratio between the stocks and market return to change the market return. CAPM further explain that actually beta act as proxy of symmetric risk of stocks. If the rise in beta stock is experienced then all the investors need to pay high risk premium which in future can result of lower the share price of the stocks. As a financial product beta has negative relation with market routine.

**3.7.3: Idiosyncratic risk i.e. standard error:**

Firm has specific risk which is not related because of negatively covariance among strength of assets returns. This shows out the asymmetrical risk assets mostly when a lot of assets are in portfolio. Now if the investor didn’t wish to invest in large number of deposits so that asymmetrical risk marks them. In Pakistan now a day’s most of the companies are privatized or owned by some families or block holders. Basically they are not diversified investors which are the main reason that, that asymmetrical risk and performance of market are negative in relation.

**3.8: Earnings per share (EPS):**

Total earnings before tax and interest divided by number of outstanding shares is the EPS. This change in earnings in relation to the present year is calculated as.
\[ \Delta \text{EPS} = \text{EPS}_2 - \text{EPS}_0/\text{EPS}_0 \]

Here \( \Delta \text{EPS} \) represents the change in earnings per share where \( \text{EPS}_2 \) stands for earnings per share for the 2\(^{nd} \) year and \( \text{EPS}_0 \) is for the earnings per share for the present year. This shows dividend change in present year. More discussion on control variables are:

### 3.8.1: Firms performance:

Mostly it’s noted that dividend is used as a device which provides signals for future. Through this signals market takes action of positive or negative response if the dividend info is satisfactory or unsatisfactory respectively in terms of earnings and profit. One common thing in all studies which is taken before is the performance and the signals of dividend announcements relationship. The response of the market is always constant in direction of change which is provided by dividend.

### 3.8.2: Tangibility:

The percentage of the company fixed assets divided by total assets is the tangibility explanation. It’s actually the proxy for the firm operating leverages which in future can be used as debt financing. Risk and return both are affected by operating leverages. If the firms are in good timing and have high operating leverage so this firm can produce better income than others and if in bad timing then it will produce less income. On the other hand, if tangibility is considered a proxy for the availability of securities, then it will be just words that to decrease the fear of lender which helps in decreasing borrowing cost.

### 3.9: Dividend change:

Dividend change is actually the announcement of dividend which more or less from the previous year. If this announcement is more in percentage so it will be positive dividend change and if this announcement is less from the previous year so it will be negative change in dividend. It explains the change in percentage of previous level of dividends like as
\[ \Delta \text{DIVIDEND} = \frac{(D_{t0} - D_{t - 1})}{D_{t - 1}} \]

Now, \( D_{t0} \) stands for the present year dividend and \( D_{t1} \) is the previous level dividend this provide the info of change.

### 3.10: Statistical Tests:

Overall study investigates the relationship between dividend change and future profitability of the firms and the relationship examine through the different methods and techniques.

### 3.11 Regression model:

Study practices the regression model for explaining the relation among independent and dependent variables. Independent variables are ROE, ROA; EPS while dependent is dividend change. Regression model analyses the data and find the relationship among the provided variable

\[ \Delta \text{DIV} = \beta_0 + \beta_1(\text{ROE}) + \beta_2(\text{ROA}) + \beta_3(\text{EPS}) + \beta_4(\text{ST}) + \beta_5(\text{lev}) + \beta_6(\text{RISK}) + \beta_7(\text{Growth}) \]

\[ \ldots + \varepsilon \]

The above equation is the equation of regression which shows the relationship of both dependent and independent variables. Here Beta is the risk factor or simply the slope among the variables. \( \beta \) actually explains the terms for analysis through regression process. Now we see here beta 1, 2, 3 and so on. This explains the coefficients of the given slopes of provided variables i.e. ROA, ROE, and EPS and the independent variables are given in the brackets.
Chapter # 4

DATA ANALYSIS

4.1: Data Analysis and Description:

Data collected for the dividend announcement from KSE-100 index banking sector for the period of 2011 to 2015. In these announcements no change were excluded from the list in that dividend announcements. All the data is analyzed properly through regression model and discussed as.

4.2: Descriptive Statistics:

Table: 1

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roe</td>
<td>60</td>
<td>.0150</td>
<td>.2818</td>
<td>.160012</td>
<td>.0649133</td>
</tr>
<tr>
<td>Eps</td>
<td>60</td>
<td>.1700</td>
<td>23.9300</td>
<td>6.570833</td>
<td>6.2945156</td>
</tr>
<tr>
<td>Roa</td>
<td>60</td>
<td>-.0022</td>
<td>.7700</td>
<td>.076257</td>
<td>.1548298</td>
</tr>
<tr>
<td>Divchange</td>
<td>60</td>
<td>32</td>
<td>9911</td>
<td>1281.17</td>
<td>1924.442</td>
</tr>
<tr>
<td>Salesturnover</td>
<td>60</td>
<td>11.1000</td>
<td>56.0000</td>
<td>16.698305</td>
<td>5.6005502</td>
</tr>
<tr>
<td>Leverage</td>
<td>60</td>
<td>12.1900</td>
<td>19.8100</td>
<td>16.257288</td>
<td>1.6929385</td>
</tr>
<tr>
<td>market Risk</td>
<td>60</td>
<td>.4300</td>
<td>2.3100</td>
<td>1.321186</td>
<td>.4960224</td>
</tr>
<tr>
<td>Growth</td>
<td>60</td>
<td>.1400</td>
<td>.9100</td>
<td>.519831</td>
<td>.1594115</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above table of descriptive statistics shows the whole analysis process of data. The observation for the variables is 60 and according to Valid N all companies are analyzed. Here in third column shows the minimum value in all variables. Fourth column shows the maximum value of the variables in data. Next column shows the mean of the variables for the period of
study which is 0.160012 the average change in ROE for change in dividend. The average mean value of EPS is 6.570833 per share. The last column shows the slandered deviation of the data of regression model.

**4.3: Model Summary:**

**Table: 2**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.340&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.115</td>
<td>-.006</td>
<td>1946.507</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), growth, eps, leverage, salesturnover, roa, roe, market Risk

From above table the value of R is 0.340. R interprets about relation in variables. Above analysis explain very clearly that variation in dependent variables by independent variables of the empirical study. Value of R square is 0.115%. This implies that how much is the change in variables explains 0.115% of that variance. This not much high but we can’t do anything with it because this all depends on facts of the company data and also attributes of the dividend policy. It may cause some change in dividend policy of the company.

**4.4: ANOVA:**

**Table: 3**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>25203937.732</td>
<td>7</td>
<td>3600562.533</td>
<td>1.95</td>
<td>.477&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Residual</td>
<td>19323364.912</td>
<td>51</td>
<td>3788889.508</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>218437302.644</td>
<td>58</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: divchange
b. Predictors: (Constant), growth, eps, leverage, salesturnover, roa, roe, market Risk

This table shows model fit of regression analysis. In df column its interpret about the data of freedom which mean that after the 3<sup>rd</sup> company all other 58 company are analyzed. The value of F test is 1.95 and P value which is significance value i.e. 0.477. Suggest that this model is
significant at our provided data. Significance of the model explains about that model is accurately predict the relationship between the variables i.e. dependent and independent variables.

4.5: Coefficients:

Table: 4

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>2853.845</td>
<td>3071.295</td>
<td>.929</td>
<td>.357</td>
</tr>
<tr>
<td>Roe</td>
<td>4877.340</td>
<td>5209.936</td>
<td>.164</td>
<td>.936</td>
</tr>
<tr>
<td>Eps</td>
<td>6.812</td>
<td>50.234</td>
<td>.022</td>
<td>.136</td>
</tr>
<tr>
<td>Roa</td>
<td>260.223</td>
<td>2109.371</td>
<td>.021</td>
<td>.123</td>
</tr>
<tr>
<td>salesturnover</td>
<td>-7.439</td>
<td>48.265</td>
<td>-.021</td>
<td>-.154</td>
</tr>
<tr>
<td>leverage</td>
<td>-112.883</td>
<td>156.036</td>
<td>-.098</td>
<td>-.723</td>
</tr>
<tr>
<td>market Risk</td>
<td>-909.801</td>
<td>701.304</td>
<td>-.233</td>
<td>-1.297</td>
</tr>
<tr>
<td>growth</td>
<td>1436.066</td>
<td>1793.295</td>
<td>.118</td>
<td>.801</td>
</tr>
</tbody>
</table>

a. Dependent Variable: divchange

This table shows coefficients of the regression model of the study. First column of the tables explains about the coefficients of the model. Second column of the tables shows estimated values of the estimated coefficients of the regression model of the study and slandered errors of the model. Now the fourth model of the tables shows the T test which compare the mean scores in continuous level i.e. ratio or interval. The final table explains about the significance of the coefficients. The slop coefficient for the relationship between EPS is 6.812 and T value is for that coefficient is 0.136 which is greater than the 5% significance level. Now if we see to the value of P which is 0.893 at significance column which shows that the relation between dividend change and EPS is significant at 5% significance level. This tells us that the positive change in payout policy is associated with positive change in future earnings prospects as in the case of equity.
### 4.6: Correlations:

#### Table: 5

<table>
<thead>
<tr>
<th></th>
<th>roe</th>
<th>Eps</th>
<th>roa</th>
<th>divchange</th>
<th>saleturnover</th>
<th>leverage</th>
<th>market Risk</th>
<th>growth</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Roe</strong></td>
<td>Pearson Correlation</td>
<td>1</td>
<td>.570**</td>
<td>-.313*</td>
<td>.213</td>
<td>-.214</td>
<td>-.048</td>
<td>-.211</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.015</td>
<td>.102</td>
<td>.104</td>
<td>.716</td>
<td>.108</td>
<td>.301</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>59</td>
<td>59</td>
<td>59</td>
</tr>
<tr>
<td><strong>Eps</strong></td>
<td>Pearson Correlation</td>
<td></td>
<td>.570**</td>
<td>1</td>
<td>-.251</td>
<td>.151</td>
<td>-.126</td>
<td>-.002</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.053</td>
<td>.248</td>
<td>.342</td>
<td>.988</td>
<td>.273</td>
<td>.805</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>59</td>
<td>59</td>
<td>59</td>
</tr>
<tr>
<td><strong>Roa</strong></td>
<td>Pearson Correlation</td>
<td>-.313*</td>
<td>-.251</td>
<td>1</td>
<td>.067</td>
<td>.007</td>
<td>-.125</td>
<td>-.456**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.015</td>
<td>.053</td>
<td>.611</td>
<td>.960</td>
<td>.346</td>
<td>.000</td>
<td>.335</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>59</td>
<td>59</td>
<td>59</td>
</tr>
<tr>
<td><strong>Divchange</strong></td>
<td>Pearson Correlation</td>
<td>-.213</td>
<td>.151</td>
<td>.067</td>
<td>1</td>
<td>-.076</td>
<td>-.151</td>
<td>-.258</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.102</td>
<td>.248</td>
<td>.611</td>
<td>.569</td>
<td>.255</td>
<td>.048</td>
<td>.953</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>59</td>
<td>59</td>
<td>59</td>
</tr>
<tr>
<td><strong>Saleturnover</strong></td>
<td>Pearson Correlation</td>
<td>-.214</td>
<td>-.126</td>
<td>.007</td>
<td>-.076</td>
<td>1</td>
<td>-.081</td>
<td>.210</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.104</td>
<td>.342</td>
<td>.960</td>
<td>.569</td>
<td>.543</td>
<td>.110</td>
<td>.114</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
</tr>
<tr>
<td><strong>Leverage</strong></td>
<td>Pearson Correlation</td>
<td>-.048</td>
<td>-.002</td>
<td>-.125</td>
<td>-.151</td>
<td>.081</td>
<td>1</td>
<td>.209</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.716</td>
<td>.988</td>
<td>.346</td>
<td>.255</td>
<td>.543</td>
<td>.112</td>
<td>.738</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
</tr>
<tr>
<td><strong>market Risk</strong></td>
<td>Pearson Correlation</td>
<td>-.211</td>
<td>-.145</td>
<td>-.456**</td>
<td>-.258**</td>
<td>.210</td>
<td>.209</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.108</td>
<td>.273</td>
<td>.000</td>
<td>.048</td>
<td>.110</td>
<td>.112</td>
<td>.002</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
<td>59</td>
</tr>
<tr>
<td><strong>Growth</strong></td>
<td>Pearson Correlation</td>
<td>-.137</td>
<td>.033</td>
<td>-.128</td>
<td>-.008</td>
<td>.208</td>
<td>.044</td>
<td>.398**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.301</td>
<td>.805</td>
<td>.335</td>
<td>.953</td>
<td>.114</td>
<td>.738</td>
<td>.002</td>
</tr>
</tbody>
</table>
Find the relationship between the variables before through regression analysis tables. More we determine the relationship with the help of co-relation tables. This table explains that dividend change do have effect on all the variables such as Eps, Roe and Roe. A clear relation between dividend change and future profitability put the value of \( p = 0.000 \) is smaller than the value of alpha that means this is greatly significant. The relation between Return on Equity and Dividend change is also significant at 0.102.

4.6: Results and Findings:

The result of the study shows that there is positive relation among returns and dividend change of the firm. This relationship is significant. This study accept alternative hypothesis that mean positive relationship of returns and dividend change of the firms.

Here in the study some control variables are discussed i.e. firm size, leverage, tangibility etc. which strongly influence the results and acts as connecting variables between dependent and independent variables.
Chapter # 5
CONCLUSION

5.1: Conclusion:

The information collected from the dividend announcements in the period of 2011 – 15. This study shows that decrease in change in payout policy is directly linked with decrease in future earnings. Same as if the increase is measured in the payout policy so it will create direct increase in future earnings and firm will blooms. Many of the new generated studies from the emerging market highly support this hypothesis.

The final result of empirical study tells us that its positive relation among return on equity and dividend change. Through statistical test the relationship is significant. It accepts the alternative hypothesis and rejects null hypothesis.

The study of the above collected data shows that there is positive relation among return on assets and dividend change of the firm and this relationship is significant. This this study accept alternative hypothesis that mean positive relationship of return on assets and dividend change of the firms study.

The relationship between earning per share and dividend change is also positive and statically significant because the P value is more than 5% the level of significance. That explains the rejection of null hypothesis which mean no relationship among dividend change and earning per share of the firms and accept the alternative hypothesis because it shows relationship among dividend change and earning per share of the firms.

The final output of the study support the information content of the dividend change and implies that positive future prospect is linked with positive future in profitability of the firm and negative future prospects linked with negative future in profitability.
5.2: Limitation:

This work does not cover all banks of Pakistan i.e. some international banks also working in Pakistan. In case all that banks are cover with the study. It will affect the significance and impact of the study. Shortage of time was another limitation.
References

Young M. Choi, Hyo K. Joo, Young K. Park (2011). Do dividends change predicate future
profitability of the firm? Accounting and finance 57, 869-891.

Change Around Dividend Changes? Journal of Accounting Research, 45(1), 1-40


Koch, A., & Sun, A. (2004). Dividend Changes and the Persistence of past Earnings


Finance, 56(6), 2111-2133.

Benartzi, S., Michaely, R., & Thaler, R. (1997). Do Changes in
Dividends Signal the Future or the Past? The Journal of Finance, 52(3), 1007-1034.


Management, 24(4), 31-51.

Elfakhani, S. (1994). The Expected Favorableness and the Signaling Role of Dividend
Announcements. *Financial Management, 23*(1),

